SIEMENS

Industrial Networks Education
Diagnostics and Optimization of Industrial Networks with SCALANCE – Virtual

General Information

Course Code: IEN-IKOILDIOPT
Length: 3 Days

Audience

This virtual course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Prerequisites

- Knowledge in accordance with the course "Switching and Routing in Industrial Networks" (IEN-IKSWROU1A).

- Participants must be very familiar with topologies, transmission methods, addressing and transport of data in industrial networks.

- Ideally, participants should have practical experience in the field of industrial networks.

Profile

This virtual course is one of four advanced level courses, available for engineers wanting to obtain the Expert Level designation of Siemens Certified Expert for Industrial Networks (CEIN).

The curriculum covers diagnosis of typical errors in industrial networks and determine how to prevent them or minimize their impact on operations through enhanced device functionality.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a virtual model and exercises for realistic demonstrations.

Objectives

Upon completion of this course, the student will learn:

- How to diagnose typical errors in industrial networks, using practical examples.
- Determine how to prevent these errors or minimize their impact through enhanced device functions.
- How to secure administrative access to components, and to restrict access to the network itself.
- Become familiar with the available tools and functions which can be used to ensure the required performance, availability and seucirty of the network.

Topics

1. Introduction to basic tools such as terminal access and network analysis tools, as well as applications for time synchronization and logging of event messages.
2. Basics of a professional network layout
3. Network analysis for troubleshooting
4. Detection and prevention of physical errors
5. Detection and prevention of Ethernet errors
6. Identification and fulfillment of security requirements
7. Detection and prevention of overload situations
8. Optimization of convergence times
9. Comprehensive exercises